Social Relationships, Interactions and Behaviour: The impact of nursery education on two year old children

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Abstract: Recent research and policy regarding the advantages of early years provision has focused largely on the enhancement and development of cognitive skills for pre-schoolers. This mixed method study was conducted in Children's Centres in ethnically diverse and disadvantaged neighbourhoods in Nottingham, England and was intended to support the evaluation of the 2 year-olds pilot, a new policy intervention intended to provide additional pre-school support for disadvantaged children. Data were collected from nursery managers and parents across six early years settings using a combination of qualitative and quantitative methods centred around in-depth observational techniques focused on children. Findings indicated that, in addition to the development of cognitive skills, children also showed increased confidence, modes of communication and interaction, and that these were associated with the varied activities and routines established within the early years settings. Furthermore, although some variations in terms of frequency and quality of interactions, activities and practice were identified, interpersonal support for learning and development was consistent across settings.

Keywords: Early years, relationships, social interaction and behaviour, mixed methods, education and disadvantage

Introduction

Recent research and policy regarding advantages of early years provision has focused largely on the enhancement and development of cognitive skills for pre-schoolers. However, studies of early education have also identified a positive relationship between children's participation in early education settings and social outcomes (Campbell et al., 2001; Liew, Chen and Hughes, 2010; Organisation for Economic Co-operation and Development (OECD), 2001; Sylva et al., 2004). Furthermore, access to early years education has been shown to have benefits for children's outcomes, particularly for disadvantaged children (Melhuish, 2004). This relationship led the previous UK Labour Government (1997-2010) to support increased access to early education provision for young children, especially those between 2 and 4 years of age. There has also been recognition that this provision should be of a high quality, rather than being based on amount of

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exposure to this experience (Peisner-Feinberg et al., 2001; Phillips, Fox and Gunnar, 2011; Sylva et al., 2006; Vandell and Wolf, 2000). This quality is intended to relate to both structural (e.g. carer-child ratio, education and training) and process elements (e.g. carer-child interactions, activities offered and learning opportunities) (Phillipsen et al., 1997; Sylva et al., 2006), and there is agreement that this process element involves the social/emotional competencies as well as the cognitive competence in promoting the development of young children (Curby, Brock and Hamre, 2013; OECD, 2004).

In the United Kingdom, since the mid-1990s, there has been a long tradition of variation in nursery and preschool provision regarding types of provider (voluntary, private and maintained) and geographical location (e.g. urban or rural) reflecting particular Local Authority (LA) emphases, funding and conditions. Despite this, there was little systematic longitudinal research on the effects of nursery provision in the United Kingdom. One exception was the Child Health Education Study, which indicated that children with some form of preschool education had better outcomes at school (Osborn and Milbank, 1987). Other evidence had been provided concerning the influence of different preschool environments on children's development (Sylva and Wiltshire, 1993). In the United States, a number of studies were being carried out at this time, and Slavin et al. (1994) used 'best evidence synthesis' to identify successful programmes for disadvantaged children. They concluded that the more successful interventions combined several 'strands', involved intensive participation by children and families and lasted for a substantial number of years. The Perry Preschool Project, later called High/Scope intervention, showed striking long-term social and economic benefits for the most disadvantaged children (Schweinhart, 2010).

However, in the United Kingdom, in 1994, the 'Start Right' Enquiry (Ball, 1994) recommended the use of longitudinal studies (involving children from a range of socioeconomic backgrounds) with baseline measures, so that the influence of preschool could be separated from those related to the individual child's personal and family characteristics. The aim was to identify and illuminate the educational processes, including pedagogy, associated with positive effects on children (Ball, 1994). As a result, a series of reports were published, which questioned the effectiveness of UK preschool education in light of significant changes and expansion in nursery and preschool provision and use and called for better coordination of services (Siraj-Blatchford, 1995). With the aim of breaking the 'cycle of disadvantage' in which disadvantaged children received poor public services and went on to school failure, poor health and low paid jobs, the then Prime Minister Tony Blair stated that

'Provision for young children – health, childcare, support – will be coordinated across departments so that when children start school they are ready to learn' (1998, cited in Belsky et al., 2007).

This led to the commissioning of the Effective Provision of Pre-school and Primary Education (EPPE 3–11) project, which was set up to examine the effects of preschool on young children's cognitive and social—behavioural development and to establish whether preschool experience provided a better start to school (Sylva et al., 2010). Commissioned at a time when there was wide diversity of provision and no common curriculum or 'standards', the EPPE research aimed to map children's developmental progress between 3 and 7 years of age, regarding influences such as child gender or birth weight, parental qualifications or employment, the home learning environment, and finally, the educational context of the child's preschool or primary school. The findings of the EPPE study illustrated the benefits of attending preschool to all children (Sammons et al., 2002, 2003a, 2003b; Sylva et al., 2004). When followed into a further phase of the study (7–11 years of age) (Melhuish et al., 2008a, 2008b; Sammons et al., 2008a, 2008b; Sylva et al., 2008), findings showed that the effects of children's preschool experience lasted until they were aged 11 years, in both cognitive and social—behavioural outcomes. Moreover, the study drew attention to the way high-quality preschool has benefits for disadvantaged children and can be seen as an effective intervention to help reduce the risk of poor educational outcomes for at-risk groups.

Of course, government-funded educational research has been criticised for some time as 'inherently one of conflict or at least a site of mutual misunderstanding and even suspicion' (Whitty, 2004: 160). However, while this divergence of interests and ideological conflict might indicate possible challenges to the robustness and integrity of the research, Whitty (2004) goes on to cite EPPE as one of his positive examples of research where 'researchers' and policy makers' interests and timescales coincide' (p. 168). However, since this research was conducted (2009-10) there has been a change of government in the United Kingdom. While the original strategy was established by the previous Labour Government, the incoming Conservative–Liberal Coalition Government announced that it would extend the free entitlement of 16 hours per week – available to every 3- and 4-year-old – to all disadvantaged 2-year-olds as part of the Education Act (2011).

Context of study

Over the past 10 years, a transformation has taken place in the United Kingdom regarding early childcare services (Sylva and Pugh, 2005). There is now a common entitlement curriculum for children between birth and age 5+ alongside fully specified and statutory 'standards of provision',

laid out in the Early Years Foundation Stage (Department for Children, Schools and Families (DCSF), 2008). In 2002, an ambitious programme called Sure Start was established and targeted children and families living in the 20 per cent most disadvantaged neighbourhoods. This was followed by the Neighbourhood Nurseries Initiative, catering to babies and toddlers in disadvantaged neighbourhoods, and in 2004, the Children's Centre programme was offered to families living in disadvantaged neighbourhoods and then rolled out to all families in England (beginning in 2008).

At the time of this study (2009-10) (Gates, Kington and Sammons, 2010; Kington, Gates and Sammons, 2013), the then Labour government-funded 'Two Year-Old Pilot Scheme' (hereafter referred to as the 'Pilot') offered free nursery provision to 2-year-old children living in areas of disadvantage. The Pilot, which operated in 32 LAs across the country, offered eligible children 16 hours of early years education per week for 38 weeks of the year and aimed to:

- 1. Improve children's social and cognitive outcomes;
- 2. Impact positively on children's parents and wider family;
- 3. Improve access to preschool for 2-year-olds of disadvantaged families (Smith et al., 2009).

A key element of the Pilot was developmental and support work with families which involved two strands of family support: i) home learning environment support (i.e. structured parent/ toddler time and other parenting support), and ii) wider parental support.

i) Home learning support

There is plenty of evidence to suggest that elements of what we call 'home learning support' can bring strong benefits to children and their families. The *Effective Pre-School, Primary and Secondary Education* study (EPPSE) explored the advantages that home learning can bring to the child during pre-school period and showed that the benefits remain strong for both academic and social behavioural outcomes through to the end of primary school at age 11 (Melhuish et al., 2007). The government's *Parents as Partners in Early Learning Project* (DCFS, 2008) expected pilot providers to promote home learning to parents, and to actively support parents to devise appropriate activities that supported their child's development, for example play with their children at home using letters and numbers, read to their children, or to visit the library with them.

ii) Family support

The government expected each participating Local Authority to put steps in place to ensure all participating families knew how to access the support they needed to provide family stability and a

positive environment for their child. Child care providers were be expected to be able to signpost families to support with services such as health advice, counselling, drug/alcohol support groups, housing advice, welfare advice, training (including targeted programmes such as family literacy, language and numeracy), and employment support.

This chapter draws on findings from a focused study (Kington, Gates and Sammons, 2013), in Nottingham, England, which explored the impact of the Pilot on the social development of the child. Although the study set out to explore the perceived impact and the benefits on the family of engaging in childcare provision, which included economic benefits (e.g. the ability to work or undertake education or training), other social benefits, benefits to family life and parenting strategies, this chapter specifically reports on those parts of the study that looked into child—adult and child—child interaction and the impact of the provision on child behaviour and the development of social relationships. It draws on both data held by the LA as well as in-depth parent and practitioner interviews, observations of child activity and childcare provision and analysis of developmental data on children.

Research design

While general exposure of children to early education has been shown to be beneficial cognitively and socially, the range of peer-based interactive opportunities has received only limited focus. This chapter reports part of the broader study (described above) and explores the nature and use of adult—child and peer groupings as they are used for the activities and interactions of six early education settings in England. One of the main goals was to identify social pedagogic practices regarding adult—child and peer relationships found in these settings, observing the time spent in each of these pedagogic conditions, the characteristics of interactions within these and the initiation and fostering of positive experiences for the children. To that end, the study drew upon qualitative and quantitative methods to provide an in-depth account of the main social activities, relationships and interactions within early years provision.

The settings

The six early years sites were selected from a list of all providers participating in the Pilot to ensure that the locations represented some of the most deprived parts of the local geographical area, and indeed the country more broadly, all being located at the bottom 10 or 20 per cent of deprivation²

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² This level of deprivation was measured using a number of scales as follows: Average Score, Income Scale, Employment Scale, data for the Lower Layer Super Output Areas (Office for National Statistics, 2007) and the Children's Services Statistical Neighbour Benchmarking Tool.

(Gates, Kington and Sammons, 2010). The sample was also selected on the basis of the following: size of provision, quality ratings from Office for Standards in Education (OfSTED) reports and two further measures of quality and environment provided by the City of Nottingham Local Authority – the Infant Toddler Environment Rating Scale—Revised Edition (ITERS-R) and the Early Childhood Environmental Rating Scale—Revised (ECERS-R) (Sylva et al., 2010).

Before research participation began, discussions and agreement concerning the purpose and nature of the research were undertaken with members of staff in each of the potential settings. In addition, parents of children in each setting were informed of the content and methods of the study, and participation of target children was agreed only with full parental consent. Further ethical criteria of anonymisation, confidentiality and safe storage of data were adhered to. Collection of data took place twice in each of the settings (July and September), which allowed all participant children to become familiar with the routines and members of staff in the provision (Table 1).

Visit one	Visit two
Questionnaire left for distribution to parents	
Semi-structured interview with centre manager	
Observation of children	Observation of children
Semi-structured interviews with parents	Semi-structured interviews with parents
	Observation of provision

Table 1: Organisation of visits

Given the need to sample a range of early years settings, we sampled the sites according to a range of criteria, and Table 2 provides background information for each provision. All provider names are pseudonyms.

Instruments

The study adopted a mixed-methods approach increasingly used in educational effectiveness studies and evaluations (Creswell, 2007; Sammons, 2010; Tashakkori and Teddlie, 2003; Teddlie and Sammons, 2010), which enabled the collection of data from different sources – children, parents, practitioners and nursery managers – with the purpose of strengthening the reliability of findings by triangulating results obtained by these different methods and from the different informants. All

project staff who visited the providers and collected data directly from children had obtained Criminal Records Bureau (CRB) Enhanced Disclosure.

Table 2: Overview of the six early years settings

Name	ITERS-R	ECERS-R	Location	No. of Staff	No. of children
First Steps	High	High/ adequate	Based within an established housing estate and integrated with a local Children's Centre. Offers private and community day care.	Approx 13	55 under 8yrs
Happy World	High/ adequate	Low/ adequate	Based in a very large, old house on a new housing estate.	30 (10 F/T)	111 under 8 yrs
Foot Prints	Low/ adequate	High	This private day nursery is based in a former college site and located opposite a large high school. It is also adjacent to a former nursery site, which the owner has now purchased in order to expand.	25	77 under 8yrs
Small Faces	N/A	High	The nursery is a committee-run provision and is integrated with a local community centre and run by a charity. The building is old, very small and was a school, but is now shared with the community.	6	26 from 2 to 5 yrs
Tree Tops	High	High/ adequate	This nursery is managed by a management committee. It operates from within a training centre, in a refurbished building. They also run training for parent groups. The nursery is well proportioned, tidy and secure.		65 under 8 yrs
Little Fairies	High/ adequate	Low/ adequate	This is a neighbourhood nursery located opposite the local Sure Start Centre and Children's Centre. The nursery is based in a former pub and is over two floors.	18	98 under 8 yrs

ITERS-R: Infant Toddler Environment Rating Scale—Revised Edition; ECERS-R: Early Childhood Environmental Rating Scale—Revised; F/T: Full Time staff.

Qualitative sources

Manager interviews

Semi-structured, face-to-face interviews were conducted with the six nursery managers to explore their perceptions of participating in the Pilot, and of both child impact and parent impact. Interviews were carried out prior to the first round of child observations.

Parent interviews

A total of 17 semi-structured parent interviews were carried out to investigate parental perceptions of their experiences in participating in the Pilot, as well as to explore their views on benefits to their child. Interviews were conducted after the child observations had been completed. Interviews were conducted either face-to-face at the nursery or by telephone (whichever was preferred by the parent), and children had been involved in the Pilot for at least 2 months at the time of interview. All parents were given a £10 gift voucher for their participation.

Manager and parent interviews were audiotaped and then transcribed. Interview transcripts were coded using analytical matrices (Miles and Huberman, 1994) in order to allow a systematic analysis of the qualitative data. Initial data reduction was carried out by preliminary first-level coding of transcripts using broad themes derived from the interview schedules. Second-level coding was then carried out to identify emergent issues within these themes. As the researchers³ coding the interviews were also involved in the data collection, coding checks⁴ were carried out for reliability. This procedure helped to clarify definition of the codes used.

Environmental field notes

These field notes were taken on the first visit to each of the providers. The aim of this method was to gain an environmental description of each of the nurseries, focusing on the location, general appearance of the building (including the pedagogical aspects of the décor and displays) and indoor and external facilities. After adding any further reflections on the site, these field notes were written up in order that they could be used in descriptive profiles of each nursery. This procedure helped to clarify the physical structure of each site and explain how and why some of the activities took place. They also allowed us to explore potentially key issues with the Managers.

³ The research team was made up of the three co-authors.

⁴ Each member of the research team coded a random selection of interview transcripts. The coding from each researcher was then compared and the coding categories were further refined.

Child observations

Observations of 4–5 Pilot children in each setting were carried out on two occasions during the study. A total of 23 children were observed. Children were observed in order to identify key tasks, activities and interactions they involved themselves in. Researchers used a schedule to log observations in the following categories: relationships with adults, relationships with other children, verbal interaction, non-verbal interaction and play. The observations were coded from the schedule into an analytical matrix, which allowed within- and across-category analysis of child activity at individual and group levels. Preliminary first-level coding of the observation data used the broad categories mentioned above. Second-level coding was then carried out to identify interesting issues within these categories.

Quantitative sources

The Adaptive Social Behaviour Inventory

The Adaptive Social Behaviour Inventory (ASBI) developed by Hogan et al. (1992) is a general measure of social and behavioural development of preschool children and has been used in a number of other studies (e.g. Burchinal and Cryer, 2003; Melhuish et al., 2001; Sammons et al., 2003a, 2003b). The inventory comprises 30 items, each representing a directly observable behaviour. Originally, the inventory was developed for parents to complete regarding their child's behaviour at home; however, it has also been validated for use in the preschool classroom by teachers and teaching assistants and has demonstrated high inter-rater consistency (Greenfield et al., 2004). In this study, the ASBI was administered to each of the observed children by a nursery practitioner on the first visit to the sites. Data collected via this method were entered into Excel (and subsequently SPSS). Data were given individual and provider identifiers in order that patterns could be identified within and across sites. Analysis was conducted initially at question level, followed by a secondary analysis at provider level. Finally, an additional level of analysis was carried out that linked the inventory data and the child observation data.

ITERS-R and ECERS-R scores

Each of the chosen providers had been given ITERS-R and/or ECERS-R scores by the Early Years Team of the LA as part of their evaluation of providers. The ITERS-R (Harms et al., 2003) consists of 39 items organised into seven subscales, each measuring a different dimension of quality (e.g. space and furnishings, care routines, listening and talking, activities, interaction, programme structure and parents and staff). These scores were considered for the selected settings (one nursery did not have an ITERS-R score) and showed:

- 39 per cent (n = 9) of observed Pilot children had taken up a free place in a setting with an ITERS-R score of 5 or above (which represents a 'good' score);
- 39 per cent (n = 9) took up a place in a setting with an ITERS-R score of 4–4.9 (which represents the higher end of 'adequate');
- 4 per cent (n = 1) took up a place in a setting with an ITERS-R score of 3–3.9 (which
 represents the lower end of 'adequate');
- 18 per cent (n = 4) of observed children were with a provider with no ITERS-R score.

The ECERS-R (Harms et al., 2005) uses the same format and scoring but is used for slightly older children (2.5–5 years). For this reason, the ITERS-R was the primary focus of analysis.

The emergence of social relationships, interactions and behaviour

Based on the analysis of qualitative and quantitative data from the six settings, themes were identified relating to adult—child and peer relationships, as well as verbal and non-verbal interactions/behaviours.

Interactions and relationships with others

Relationships with adults

Within the groupings observed, there were between three and four adults present with ratios approximately 1:3. Child—adult relationships indicated a number of similarities across the six settings, the most common being *praise and feedback*, followed by *questioning by the child* and *listening*. In all settings, child relationships with adults also involved the *child seeking attention* and *wanting to be in close proximity to the adult*, and in four of the nurseries, *watching the behaviour of adults* was also observed. In the settings with an ITERS-R score of 5.0 or above, the balance of the relationship between adult and child was fairly equal, which indicates that children were encouraged to initiate these relationships. It was also the case that these settings demonstrated more one-to-one relationships:

We try to have one-to-one time with all of the children a couple of time a week, depending on how often they attend. It helps to develop our relationships with them and also helps them to get used to spending time with an adult other than a parent (Staff interview).

Adult—child relationships in the remaining nurseries were more likely to be initiated by the adult and were also more likely to involve a group of four or more children.

When in groups, the children spoke of wanting to be with people who care about them. An interesting sub-theme within this dimension was the importance of the link between feeling that they were in an environment in which they were cared about and the arrival routines:

He always says how much he loves the staff here and how caring they are. Every morning he runs up to [name of carer] and gives her a big hug and when he leaves, he always tells her he loves her. (Parent interview)

As can be seen from this comment by a parent, being with people who they felt cared for them was of high importance to children, but equally, this reflects a broader theme which surfaced several times and reflected the difference between *caring for* and *caring about*. Working-class parents are often torn between two contrasting discourses – being a good parent and working to escape poverty (Vincent and Ball, 2001; Vincent et al., 2008, 2010; Volling and Belsky, 1993). One resolution of the guilt created by this conflict is through finding a childcare setting where care and education are enhanced by what Page (2011) calls *professional love* through which 'we can better understand the dilemmas faced by parents, especially mothers, when they decide to place their babies in day care to return to work' (p. 320).

Relationships with other children

Again, the relationships between children had a number of similar characteristics. The most common of these were *imitation, co-dependence* and *sharing*, which were observed in all nurseries. There were also negative characteristics seen in three of the settings – *aggression* and *confrontation*. In five of the six providers, relationships with other children involved *seeking involvement with others* and *observing others*. In the settings with an ITERS-R score of 5.0 or above, there seemed to be a greater degree of sharing in these relationships. While many of the practitioners acknowledged that the children in their setting related well to one another, most of these positive relationships were identified within existing friendship relationships (rather than extending to all children in the setting):

They tend to play with the same children and have formed friendship groups already. We mix them up for some activities but when they have free play, they always go back to their friends. (Staff interview)

A number of practitioners noted that most small groups were predominantly same-gender groups (complementing the friendship basis of groups) but practitioners did not seem concerned about this:

Boys play with boys and girls play with other girls at this age – it's just how it is, but they start mixing a bit more as they get to preschool. (Staff interview)

Any concerns practitioners had regarding the ways in which children related to other children centred around the maintenance of relationships, exclusion of individual children from groups, conflicts that may arise within groups, domination of others and lack of social confidence:

Some children already know each other when they start here and it can be hard for children who don't know anyone. Girls especially take longer to accept new members into their group. (Staff interview)

Despite these difficulties, nursery managers and parents perceived a major benefit of the provision to be in the area of friendships:

Friendships are quite hard to define at this age, but we do see the beginnings of some very strong friendships. (Staff interview)

You start to see them responding to other particular children in a positive way, working on tasks together, role playing, that sort of thing. (Parent interview)

Opportunities for interaction

Verbal interactions

Adult-led interactions (including praise, instruction and questioning) were the most common across all six nurseries and involved the majority of the observed children. In the six nursery settings observed, six categories of adult-initiated interaction emerged. These included the following:

- 1. Maintaining discipline discouraging child from doing something, according to the nursery rules, for example, to sit up straight, to listen and to pay attention;
- 2. Directing/instructing taking an active role in the instruction or guidance of children in order to learn or experience new skills or knowledge;
- 3. Dealing with daily needs adjusting clothing or getting a child a drink;
- 4. Expressing feelings showing praise, likes, dislikes or paying attention to a child's emotional needs, for example, comfort;
- 5. Asking questions asking children to answer questions in order to reinforce content that they have learned or to describe an experience;
- 6. Playing participating in play as a companion, for example, choosing to play a game of snap with a child.

In five of the providers, child-led interactions were identified, almost half of which required interventions from a staff member. These included the following:

- 1. Expressing behaviour in order to gain more care and attention from adults, for example, making a face or using a different voice;
- 2. Expressing ideas, thoughts and opinions that are different from those of the adult;
- 3. Inquiring about something they are interested in;
- 4. Requesting permission before proceeding with an activity, for example, going to the toilet, needing a drink of water;
- 5. Sharing information such as with regard to other children who might have been breaking the rules, not listening or causing irritation.

Both staff and parents frequently reported that one of the positive effects of the early experiences was the increased opportunity for verbal interaction with other adults and children, as the following comments illustrate:

My youngest has been coming here for a few months now and she is so much more confident when other people are around, adults and children, it's amazing! (Parent interview)

I think this will certainly help him when he goes to pre-school because he'll be so much ahead of the rest who haven't had this experience. (Parent interview) Through these increased opportunities, language became another significant developmental area:

Once the children have something to talk about at home, the parents talk more to them and this has a really positive affect. (Staff interview)

One boy was just grunting when he came here now he says good morning and responds to his name and is really coming along. He is picking up everyday words. (Staff interview)

Examples of these new skills in language and communication given by parents focused on repetition of nursery rhymes and using partial and full sentences:

I've really noticed a difference in her language. She's asking for what she wants and it all makes sense now. (Parent interview)

In the settings with ITERS-R score of 5.0 or above, the balance of who initiated the activities, staff or child, was very equal, suggesting that children were encouraged to initiate activities and interactions. The children in nurseries with lower ITERS-R scores experienced a different balance of initiation, with a much greater emphasis on staff initiated episodes.

Non-verbal interactions

Aspects of non-verbal interaction reported by staff included *confidence, control, enjoyment, closeness, demonstrating, role playing* and *cooperation*. The ability to share was reported by staff as the behaviour most greatly improved by attending the provision with children learning to participate in a range of experiences and cope with social aspects of play such as sharing toys, choosing activities and turn-taking:

There can be some shouting and crying and pushing to start with because most of them are used to getting their own way at home and having toys of their own to play with. They come here and suddenly there are others who want to play with the same toy and learning how to deal with that is quite difficult. (Staff interview)

Being able to wait their turn when they're playing or eating is really important and they often can't do this when they come here. Seeing them being able to do that and not think everything is about them all the time is rewarding. (Staff interview)

Likewise, parents saw the improvements that covered interactions with peers and adults, sharing, polite manners and understanding boundaries:

The biggest difference is in their social skills – being able to play within boundaries is an important part of being able to function and interact with other people. (Parent interview)

These non-verbal interactions were observed in single-child, child—child and adult—child situations. A greater variety of non-verbal interaction was observed in the three providers with ITERS-R scores of 5.0 or above. In the nursery with the lowest ITERS-R score (3.0–3.9), children were less likely to demonstrate, show confidence, cooperate or participate in role play and more observations of children watching others and not being involved in their own activity.

When looking for explanations for the commonalities and difference apparent between settings, two key areas emerged: the importance of routines, and the variation in type of activities experienced by the children.

Routines

Within the early years settings, the requirements of the daily routine led to increased opportunities for social interaction between practitioners and children. The children were able to describe in detail the various routines of the childcare day, including story time, lunchtime, outdoor playtime, circle time and quiet time. As the children identified the various activities, it became clear that they valued the feeling of having an important role to play in the childcare setting, and their experience was significantly enhanced when they were given valued roles to play in the routines of the day:

I like it when it's playtime cos I have to take all the games back to the cupboard. I don't do it on my own but I do do it on my own on Fridays. (Field notes – child, age 2 years).

One of the major reported benefits of these routines was improved discipline both in the childcare setting and at home. Interviews with staff and parents indicate that the practitioners supported parents in identifying the importance of routine and transferring this into the home setting developing positive approaches to parenting, particularly in relation to discipline and boundaries:

We try to help parents see that the way we do things here can help them at home too. (Staff interview)

A lot of the strategies we employ here can be used in the home as well as here. It's all about boundaries and knowing what is acceptable behaviour. (Staff interview)

Parents felt that the provision for their child, in addition to the support and guidance, had given them a better understanding of their child, improved their relationship with their child and helped them with parenting skills and learning at home:

... we have a routine at home now which has been great. Especially as I have another child at home with me. (Parent interview)

I have got a lot of ideas from what my daughter has done here – we now do lots of activities, like painting and making things. (Parent interview)

The child's capacity to effectively cooperate with other children and adults was also identified by managers as an area that had improved from attendance of the nursery provision. Evidence of this was seen by practitioners during play, meal times, story time and end of day routines:

When children first come here, they haven't usually been in any formal setting before and they really have no idea how to behave around lots of other children. Within a few days this improves, and after a couple of weeks they are co-operating with each other and learning how to work together. (Staff interview)

Parents noticed that their children were very positive about attending the setting because they enjoyed it so much, reporting they were looking forward to their sessions and were asking to go on the days they were not meant to attend. Significantly, the children had started to expect routine at home:

My son loves it here and misses having the routine so we have it at home now too. It has really helped with things like eating, toileting, napping. (Parent interview)

Observational data provided additional evidence of the benefit of routine to children in their social and behavioural development, as measured by the ASBI instrument. This highlighted the fact that children who were more positive about fixed routine also demonstrated more positive behaviour. However, the quality of the centre was also important in this respect, and better social and behavioural outcomes through adherence and embracing of routines were found in settings with higher ITERS-R scores.

The benefits of routines, far from being just about creating order in the home, have been shown to be particularly significant in the cognitive and social development of the child particularly for children from disadvantaged backgrounds:

Homes characterized by structure, order, exposure to outside events, regularity, and safety have been shown to predict positive developmental outcomes in children. (Albright and Tamis-LeMonda, 2002: 25)

Regularity refers to consistency in daily routines including meal times, nap times, and bath times, all of which have been found to relate to preschool children's abilities to follow directions, get along with other children and maintain alertness in school. (Egeland et al., 1990). Hence, it would appear that the professionals' natural desire for order within the setting was having a further effect of providing greater opportunities for children's growth at home.

Types of activity

Observed and reported individual child activity

Given the relatively small sample of children observed, and in an attempt to link the items on the inventory to improvements in child development identified by the nursery managers (and parents, see below), the ASBI questionnaire responses were divided into six subscales, namely, social skills, language, behaviour, life skills, confidence and sharing. In all of the subscales, higher scores indicate better behaviour where the statement is positive, whereas a lower score indicates better behaviour where the statement is negative as it suggests a lower incidence of negative behaviour. Of the six sites taking part in the evaluation, five completed the inventory for a total of 22 children (Table 3).

	Improvement of	Average score	Reduction of	Average score
	positive aspects		negative aspects	
Social skills	281	2.13	44	2.00
Language skills	140	2.12	N/A	N/A
Behaviour	235	2.14	138	1.57
Life skills	48	2.18	N/A	N/A
Confidence	185	2.10	74	1.68
Sharing skills	125	1.89	36	1.64

Table 3. Overall scores for the ASBI by positive and negative aspects.

These findings suggest that participating nurseries were effective in promoting positive aspects of development, with providers scoring an average of 2.10 or above (out of 3.0) in relation to social skills, language, behaviour, life skills and confidence. This indicates that these positive aspects of development were happening either *sometimes* or *almost always*. The average score was slightly lower for 'sharing' at 1.89. The scores also show that nurseries were fairly successful in reducing negative aspects of development. Average scores ranged from 1.57 to 2.00, which indicate that these aspects of behaviour were taking place either *sometimes* or *rarely/never*. The area with the highest score was 'negative social skills'.

We also examined these data in terms of the ITERS-R scores given to each of the providers. This analysis showed that the average scores recorded for all positive items on the ASBI scale were higher for the provider with a low ITERS-R score (Foot Prints). This is most apparent when looking at the area of 'behaviour skills'. In terms of reduction of negative areas of development, Foot Prints also showed greater success. The providers who scored high consistently (which indicates higher frequency of negative development) in each area were Happy World and Little Fairies, both of which had high or adequate ITERS-R scores.

Perceptions of group activity

The methods developed and adapted for this study focused, in particular, on social groupings when children were pursuing activities that had been planned/structured by their practitioners, as well as free play. From the environmental field notes, it was noted that in all six of the settings, learning contexts offered an environment conducive to collective actions and, in support of this, activities and tasks that would support a collaborative context were frequently observed. Among the types of activities practitioners perceived that children liked to undertake in their settings were the following: play, arts and crafts, literacy (informal reading/listening to books), singing/music, creative activities, circle time, talking and outdoor play. In almost every setting, and consistent with an early years

education philosophy, play was seen to be an important activity among children. Children were observed in both practitioner- and child-oriented groupings during activity sessions.

When peer behaviour was further analysed, children were shown to be repeatedly engaged in collaborative interactions and relational activities, yet these were of two main types: larger grouping of organised activities and smaller, more introverted self-directed play. In general, interview responses from staff indicated high levels of material preparation for children to engage socially:

We spend a lot of time planning the materials for activities – you never know what they will want to do and things can change if the weather is bad, for example, and they can't go outside at all, and then they need a lot more to engage with so that they don't get bored. (Staff interview)

Everything has to be to hand so that we can move from one activity to another, especially when the children are doing something in groups. (Staff interview)

Practitioner-oriented groupings were much larger than child-oriented groupings, used joint communication and were likely to be composed of an inclusive mixture of children (by gender, friendship, age etc.). Child-oriented groups were characterised by their small size (about 2–3 children), joint and solitary activity and social exclusivity. Comparison across the settings showed a high degree of similarity, denoting that a majority of children's (within-setting) activities were undertaken with peers and with relatively little planning or support by practitioners. Therefore, while practitioners acknowledged that children received a range of everyday group experience, much of this was not formally arranged, with the exception of circle time/show and tell:

We let the children choose what and how they want to play outside of things like lunch, circle time, news time, etc. (Staff interview)

Everyday group experiences were noted where more than one child could participate at the same time as others, but these activities did not include specific participation or 'roles'. Children who have experienced a more solitary home context, usually those from more disadvantaged, low socioeconomic status (SES) homes, would have had fewer opportunities to develop greater social competence with peers (Howes, 1988) and tended to engage in more solitary or dyadic play. In some settings, specific activities were used to encourage cooperation and working together:

We try to suggest games or toys that will help particular children work together, especially if there have been some problems between children. (Staff interview)

Furthermore, practitioners mentioned verbal interactions with individual children concerning how to play with other children, especially when interpersonal problems (selecting a leader, taking turns) arose:

There are a few times when we have to step in and explain why it is important to be nice to each other, or why someone was playing with something first, that sort of thing. It's important that they learn this stuff (Staff interview)

Learning to interact and cooperate with larger and more diverse groups was seen as a crucial skill within the settings such that there were some explicit attempts to place children in larger groups in order to facilitate this. The next section explores the various interactions and relationships with adults and other children.

Discussion

The argument of this chapter is that the early years experiences of very young children from disadvantaged backgrounds can be particularly significant in providing social environments which contribute to both social and cognitive enhancement (Kutnick et al., 2007; Curby, Brock and Hamre, 2013; Sammons et al., 2008b; Sylva et al., 2006, 2010). These environments are closely connected to particular routines, activity settings and relationships and relate to the quality of the setting. The issue of quality is known to influence long-term cognitive and behavioural development as 'children who attended low quality pre-schools had cognitive and behavioural scores that were not significantly different from those of children with no pre-school experience' (Sylva et al., 2011: 109).

The overarching themes that emerged in this study are not so very different from themes that have been highlighted in other research on the child's experience of care settings (Clark, 2005), such as importance of friends, role of adults and routines. However, we have seen how the structure of the provision can positively influence the home learning environment for those children targeted in the Pilot. Furthermore, it can be seen from the descriptions of play activities that friendships have an important role in a child's sense of control over their environment, and this is important to their wider sense of well-being; we learn that the children want to feel valued and that this happens most

effectively when children are given valued roles in the everyday routines of the care environment; we learn that fostering a child's caring relationships is very important to the child's experience, particularly in the rituals and routines associated with arrival (Clark and Moss, 2011; Phillips, Fox and Gunnar, 2011).

The specific daily routines that were reported by staff and parents, such as tidying up, circle time, meal time and so on, reflect findings by Kutnick et al. (2007) who found this was the case across a number of European settings and that children favoured clear routine as opposed to uncertainty regarding daily rituals. This can have particular influence in those homes that may lack formal routines (Crittenden, 1989; Stevens and Bakeman, 1985). Observational data that focused on routine, activity, relationships and other aspects of quality provision supported this; however, while the number of cases involved was too small to comment on statistical significance, the results are in line with other research that indicates that preschool quality is an important influence on child outcomes (e.g. Burchinal and Cryer, 2003; Sylva et al., 2010).

In terms of children's relationships with adults, it seems that respect for and the demonstration of a caring relationship play a very important role in how children are welcomed to the setting (Page, 2011). This focus opens the way for the development of concrete strategies for improving children's experiences. Once particular feelings are associated with particular activity settings, targeted strategies can be designed to achieve positive outcomes (Kutnick et al., 2007; Phillips, Fox and Gunnar, 2011). For example, greater importance can be given to the development of welcome rituals and to ensure that the children are able to spend more time (at least upon arrival) with the people with whom they share a caring relationship (Clark and Moss, 2001; Howes and Hamilton, 1992).

This degree of closeness present in the adult—child relationships is an important variable to consider. Children who share a close relationship with the practitioners may feel better able to utilise the supervising adults as a source of support in the nursery environment, and this may result in their being better able to benefit from learning activities through increased confidence (Howes et al., 1994; Kutnick et al., 2007). Fostering these close relationships may, therefore, enable children to become self-directed and responsible participants in the nursery setting and, later, in preschool (Hohmann and Weikart, 1995). Conversely, children who are perceived by practitioners as over-dependent may be attempting to utilise the supervising adults as a source of support in an environment in which they feel lonely or unfamiliar. This attachment to nursery staff may also keep

children from exploring relationships with their peers. This may, in turn, restrict their opportunities for social interaction (Howes and Hamilton, 1993; Thomason and La Paro, 2013).

Children also show their interest in other children from an early age (Howes, 1988; Kutnick and Kington, 2005; Rubin et al., 2006). During the preschool age, they become increasingly focused on playing with their peers and on what other children say and do. Preschool children have a large influence on each other, and dominance and status in the preschool group are established from an early age. The importance to children of relationships with other children in the group was also clear in this study. In general, this finding contributes to the existing research evidence for the importance of friendships to young children (Baines et al., 2003; Kutnick and Kington, 2005; Rubin et al., 2006). The more original contribution of this research comes from identification of the connections between these relationships and particular activities that took place and daily routines. The combination of these factors suggested an enhanced confidence and sense of control over their environment (Clark and Moss, 2011; Howes and Hamilton, 1993). This connection was initially prompted by the observations which identified children who would express themselves far more confidently during group activities (whether child- or practitioner oriented) (Hohmann and Weikart, 1995). In many cases, these were also the children who were described as having many friends and at least one 'best friend' by the practitioners (Kutnick et al., 2007). It seems that these children were able to use their friendships and activities as an avenue for building confidence and exerting control. The key message from this finding is that positive peer relationships and friendships play a key role in facilitating belonging and that shared activities are potentially valuable avenues through which children can develop a sense of confidence and exercise control within an environment outside of their home (Kutnick et al., 2007; Kutnick and Kington, 2005; Phillips, Fox and Gunnar, 2011).

Both cognitive skills and language skills are clearly involved in developing relationships with others (Berndt, 2004; Hartup, 1998), and the observed children demonstrated an emerging ability to take the perspective of others. This goes beyond what has been suggested in some studies that in the second year of life, children are able to form expectations about and anticipate what other people do (Haselager et al., 2002). At 3 years of age, most children are able to pay attention to others' conversations (Dunn and Shatz, 1989), and they respond when spoken about or mentioned by name (Forrester, 1988).

Finally, child-child talk was also reported to be characterised by cooperation, with the dialogues increasing in length over time, supporting research by French et al. (1985). Peer engagement also

inevitably involves conflict and subsequent expressions of anger, occasional selfish ego-centric behaviour and assertion of will or opinion within a group. However, peer interactions involving conflict were found to be associated with both sociability and social skills (Curby, Brock and Hamre, 2013). Such interactions are thought to provide opportunities for children to learn effective conflict resolution (Pelligrini et al., 1997), which they are then able to bring back into the home setting. Having this early exposure to childcare may be more socially active later in preschool than their peers who have not had this experience. In fact, it has been argued that children who fail to acquire and act according to the rules of language use have trouble in adapting to and being integrated into the child group (Donahue and Prescott, 1988; Farmer and Oliver, 2004).

Conclusion

Understanding children's experiences can contribute to discussions around best practice in early childhood settings, particularly in light of the movement towards seeing children as active stakeholders themselves rather than the dependents of parent stakeholders. The methodologies utilised within this project provide a rich source of data upon which to explore the quantity and quality of time children spent interacting both with each other and with practitioners and how practitioners support activities within early education settings. While there was some variation between the settings observed, there were also a number of similarities. Our data suggest that nursery education for 2-year-old children, particularly those from disadvantaged backgrounds, may provide a valuable transition experience before they enter formal preschool education settings. Attendance at such early environments should help children begin to feel comfortable in formal educational settings and develop relationships and interaction skills with peers and adults; they may also help prepare the parents. Such a strategy might go some way to alleviate the disadvantages experienced by many young children who start formal schooling unprepared both cognitively and socially, thus fitting well within an early intervention strategy.

The findings from this study have implications for future studies of children's social development, including the relative contributions of both adult–child (e.g. Kutnick et al., 2007; Liew, Chen and Hughes, 2010) and peer relationships (e.g. Katz, 2004; Selby and Bradley, 2003) to nursery provision and beyond. Indeed, analyses of data addressing this issue suggest that adult–child and peer relationships may be associated with different aspects of children's adjustment in early years contexts. Furthermore, although the mixed-methods design of this investigation allowed an in-depth exploration of the relevant issues, longitudinal studies of the connection between the quality of

adult—child relationships and the associated benefits of nursery provision starting at 2 years of age would shed light on the issue of the direction of effects or causal priority among these variables.

Finally, the results of the study raise important implications for adults involved in nursery and preschool education in terms of perceptions and training. This study suggests that the perceptions held by nursery practitioners regarding the quality of their relationships with children are associated with children's performance on cognitive tasks, friendship development and liking of the educational experience. Thus, the quality of children's adult—child relationships may have far reaching significance in terms of the various educational trajectories that children follow throughout their schooling experience as well as other benefits in enhancing the home as a place of learning (Johnson and Kossykh, 2008).

References

Albright, M. and Tamis-LeMonda, C. (2002). Maternal depressive symptoms in relation to dimensions of parenting in low-income mothers. *Applied Developmental Science* 6(1): 24–34.

Baines, E., Blatchford, P. and Kutnick, P. (2003). Changes in grouping practice over primary and secondary school. *International Journal of Educational Research* 39: 9–34.

Ball, C. (1994). Start Right: The Importance of Early Learning. London: RSA.

Belsky, J., Barnes, J. and Melhuish, E. (eds) (2007). *The National Evaluation of Sure Start: Does Area-Based Early Intervention Work*. Bristol: The Policy Press.

Berndt, T.J. (2004) Children's friendships: shifts over a half century in perspectives on their development and their effects. *Merrill-Palmer Quarterly* 50: 206–223.

Burchinal, M.R. and Cryer, D. (2003). Diversity, child care quality, and developmental outcomes. *Early Childhood Research Quarterly* 18(4): 401–426.

Campbell, F.A., Pungello, S., Miller-Johnson, S., et al. (2001). The development of cognitive and academic abilities: growth curves from an early childhood educational experiment. *Developmental Psychology* 37(2):231–242.

Clark, A. (2005). Listening to and involving young children: a review of research and practice. *Early Child Development and Care* 175(6): 489–505.

Clark, A. and Moss, P. (2001). *Listening to Young Children: The Mosaic Approach*. London: National Children's Bureau for the Joseph Rowntree Foundation.

Creswell, J.W. (2007). Designing and conducting mixed methods research. *Australian and New Zealand Journal of Public Health* 31(4): 388.

Clark, A. and Moss, P. (2011). *Listening to Young Children: The Mosaic Approach*. 2nd ed. London: National Children's Bureau.

Crittenden, P.M. (1989). Teaching maltreated children in the preschool. *Topics in Early Childhood Special Education* 9: 16–32.

Curby, T.W., Brock, L.L., and Hamre, B.K. (2013). Teachers' emotional support consistency predicts children's achievement gains and social skills. *Early Education & Development*, 24, 292–309.

Department for Children, Schools and Families (DCSF) (2008) *Early Years Foundation Stage*. Nottingham: DCSF Publications.

Donahue, M. and Prescott, B. (1988). Reading-disabled children's conversational participation in dispute episodes with peers. *First Language* 8(24): 247–257.

Dunn, J. and Shatz, M. (1989). Becoming a conversationalist despite (or because of) having an older sibling. *Child Development* 60(2): 399–410.

Education Act 2011 (c.21). London: HMSO.

Egeland, B., Kalkoske, M., Gottesman, N., et al. (1990). Preschool behavior problems: stability and factors accounting for change. *Journal of Child Psychology and Psychiatry* 31: 891–909.

Farmer, M. and Oliver, A. (2004). Assessment of pragmatic difficulties and socioemotional adjustment in practice. *International Journal of Language & Communication Disorders* 40(4): 403–429.

Forrester, M.A. (1988). Young children's polyadic conversation monitoring skills. *First Language* 8(24): 201–226.

French, L., Lucariello, J., Seidman, S., et al. (1985). The influence of discourse content and context on preschoolers' use of language. In: Galda L and Pelligrini AD (eds) *Play, Language and Stories: The Development of Children's Literate Behavior*. Norwood, NJ: Ablex, pp. 1–27.

Gates, P and Kington, A and Sammons, P (2010) *An Evaluation of the Early Years Two Year Pilot Scheme in the City of Nottingham.* Project Report. Nottingham City Council, Nottingham.

Greenfield, D., Iruka, I. and Munis, P. (2004). Assessment of social competence in high risk preschoolers: evaluation of the adaptive social behavior inventory (ASBI) across home and school settings. *Journal of Psychoeducational Assessment* 22(3): 220–232.

Harms, T., Clifford, R.M. and Cryer, D. (2005). *Early Childhood Environment Rating Scale – Revised Edition*. New York: Teachers College Press.

Harms, T., Cryer, D. and Clifford, R. (2003). *Infant/Toddler Environment Rating Scale – Revised*. New York: Teachers College Press.

Hartup, W.W. (1998). Friendships and developmental significance. In: Campbell A and Muncer S (eds) *The Social Child*. Hove: Psychology Press, pp. 143–164.

Haselager, G.J.T., Cillessen, A.H.N., Van Lieshout, C.F.M., et al. (2002). Heterogeneity among peer-rejected boys across middle childhood: developmental pathways of social behaviour. *Developmental Psychology* 38(3): 446–456.

Hogan, A.E., Scott, K.G. and Bauer, C.R. (1992). The adaptive social behavior inventory (ASBI): a new assessment of social competence in high risk three year olds. *Journal of Psychoeducational Assessment* 10: 230–239.

Hohmann, M. and Weikart, D.P. (1995). *Educating Young Children: Active Learning Practices for Preschool and Child Care Programs*. Ypsilanti, MI: High/Scope Press.

Howes, C. (1988). Peer interaction of young children. *Monographs of the Society for Research in Child Development* 53(1): 1–92.

Howes, C. and Hamilton, C.E. (1992). Children's relationships with caregivers: mothers and child care teachers. *Child Development* 63: 859–866.

Howes, C. and Hamilton, C.E. (1993). The changing experience of child care: changes in teachers and in teacher child relationships and children's social competence with peers. *Early Childhood Research Quarterly* 8: 15–32.

Howes, C., Matheson, C.C. and Hamilton, C.E. (1994). Maternal, teacher and child care history correlates of children's relationships with peers. *Child Development* 65: 264–273.

Johnson, P. and Kossykh, Y. (2008). *Early Years, Life Chances and Equality: A Literature Review*. Manchester: Equality and Human Rights Commission.

Katz, J.R. (2004). Building peer relationships in talk: toddlers' peer conversations in childcare. *Discourse Studies* 6(3): 329–347.

Kington, A., Gates, P., & Sammons, P. (2013). Development of social relationships, interactions and behaviours in early education settings. *Journal of Early Childhood Research*, *11*(3), 292-311. doi: 10.1177/1476718X13492936

Kington, A., Sammons, P., Day, C., et al. (2011). Stories and statistics: describing a mixed method study of effective classroom practice. *Journal of Mixed Methods Research* 5(2): 103–125.

Kutnick, P. and Kington, A. (2005). Children's friendships and learning in school: cognitive enhancement through social interaction? *British Journal of Educational Psychology* 75: 521–538.

Kutnick, P., Brighi, A., Avgitidou, S., et al. (2007). The role and practice of interpersonal relationships in European early education settings: sites for enhancing social inclusion, personal growth and learning? *European Early Childhood Education Research Journal* 15(3): 379–406.

Liew, J., Chen, Q., and Hughes, J.N. (2010). Child effortful control, teacher-student relationships, and achievement in academically at-risk children: Additive and interactive effects. *Early Childhood Research Quarterly*, 25(1), 51-64.

Melhuish, E.C. (2004). A Literature Review of the Impact of Early Years Provision upon Young Children, with Emphasis Given to Children from Disadvantaged Backgrounds. Report to the Comptroller and Auditor General. London: National Audit Office.

Melhuish, E.C., Quinn, L., Sylva, K., et al. (2001). *Effective Pre-School Provision in Northern Ireland* (EPPNI): Cognitive and Social/Behavioural Development at 3-4 Years in Relation to Family Background. Belfast: Stranmillis University College.

Melhuish, E.C., Sammons, P., Sylva, K., et al. (2008a). *Tracking and Mobility over the Pre-School and Primary School Period: Evidence from EPPE 3-11*. London: Institute of Education.

Melhuish, E.C., Sylva, K., Sammons, P., et al. (2008b). The early years: preschool influences on mathematics achievement. *Science* 321: 1161–1162.

Miles, M. and Huberman, M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks, CA: SAGE.

Office for National Statistics (2007). Indices of deprivation across the UK. Available at: http://www.neighbourhood.

 $statistics.gov.uk/dissemination/Info.do?page=analysis and guidance/analysis articles/indices-of deprivation. \\ htm$

Organisation for Economic Co-operation and Development (OECD) (2001). *Starting Strong: Early Childhood Education and Care*. Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2004). *Curricula and Pedagogies in Early Childhood Education and Care*. Paris: OECD.

Osborn, A.F. and Milbank, J.E. (1987). *The Effects of Early Education. A Report from the Child Health and Education Study*. Oxford: Clarendon Press.

Page, J. (2011). Do mothers want professional carers to love their babies? *Journal of Early Childhood Research* 9(3): 310–323.

Peisner-Feinberg, E.S., Burchinal, M., Clifford, R.M., et al. (2001). The relation of preschool child care quality to children's cognitive and social developmental trajectories through second grade. *Child Development* 72(5): 1534–1553.

Pelligrini, A., Galda, L. and Flor, D. (1997). Relationships, individual differences and children's use of literate language. *British Journal of Educational Psychology* 67: 139–152.

Phillips, D., Fox, N., and Gunnar, M. (2011). Same place, different experiences: Bringing individual differences to research in child care. *Child Development Perspectives*, 5(1), 44-49.

Phillipsen, L.C., Burchinal, M., Howes, C., et al. (1997). The prediction of process quality from structural features of child care. *Early Childhood Research Quarterly* 12(3): 281–303.

Rubin, K.H., Bukowski, W.M. and Parker, J.G. (2006). Peer interactions, relationships and groups. In: Eisenberg N, Damon W and Lerner RM (eds) *Handbook of Child Psychology: Social, Emotional and Personality Development*, vol. 3. Hoboken, NJ: Wiley, pp. 571–645.

Sammons, P. (2010). The contribution of mixed methods to recent research on educational effectiveness. In: Tashakkori A and Teddlie C (eds) *Handbook of Mixed Methods Research*. 2nd ed. Thousand Oaks, CA: SAGE, pp. 697–724.

Sammons, P., Sylva, K., Melhuish, E.C., et al. (2002). *The Effective Provision of Pre-School Education* (EPPE) Project: Technical Paper 8a – Measuring the Impact of Pre-School on Children's Cognitive Progress over the Pre-School Period. London: DfES/Institute of Education, University of London.

Sammons, P., Sylva, K., Melhuish, E.C., et al. (2003a). *The Effective Provision of Pre-School Education* (EPPE) Project: Technical Paper 8b — Measuring the Impact of Pre-School on Children's Social/Behavioural Development over the Pre-School Period. London: DfES/Institute of Education, University of London.

Sammons, P., Sylva, K., Melhuish, E.C., et al. (2008a). *The Effective Pre-School and Primary Education* 3–11 (EPPE 3–11.) Project: Influences on Children's Attainment and Progress in Key Stage 2: Cognitive Outcomes in Year 6. London: DCSF/Institute of Education, University of London.

Sammons, P., Sylva, K., Melhuish, E.C., et al. (2008b). *The Effective Pre-School and Primary Education* 3–11 (EPPE 3–11.) Project: Influences on Children's Development and Progress in Key Stage 2: Social/Behavioural Outcomes in Year 6. London: DCSF/Institute of Education, University of London.

Sammons, P., Taggart, B., Smees, R., et al. (2003b). *The Early Years Transition and Special Educational Needs (EYTSEN) Project*. London: DfES/Institute of Education, University of London.

Schweinhart, L. (2010). The challenge of the HighScope Perry Preschool Study. In: Reynolds AJ, Rolnick AJ, Englund MM, et al. (eds) *Childhood Programs and Practices in the First Decade of Life: A Human Capital Integration*. New York: Cambridge University Press, pp. 157–167.

Selby, J.M. and Bradley, B.S. (2003). Infants in groups: a paradigm for the study of early social experience. *Human Development* 46(4): 197–221.

Siraj-Blatchford, I. (1995). Expanding combined nursery provision: bridging the gap between care and education. In: Gammage P and Meighan J (eds) *The Early Years: The Way Forward*. Nottingham: Education New Books, 1–17.

Slavin, R.E., Karweit, N,L., Wasik,, B.A., et al. (eds) (1994). *Preventing Early School Failure: Research, Policy, and Practice*. Boston, MA: Allyn & Bacon.

Smith, R., Purdon, S., Schneider, V., et al. (2009). *Early education pilot for two year old children evaluation*. Research Brief DCFS-RB134. July. London: Department for Children, Schools and Families.

Stevens, J. and Bakeman, R. (1985). A factor analytic study of the HOME scale for infants. *Developmental Psychology* 21: 1196–1203.

Sylva, K. and Pugh, G. (2005). Transforming the early years in England. *Oxford Review of Education* 31(1): 11–27.

Sylva, K. and Wiltshire, J. (1993). The impact of early learning on children's later development. A review prepared for the RSA enquiry 'Start Right'. *European Early Childhood Education Research Journal* 1: 17–40.

Sylva, K., Melhuish, E.C., Sammons, P., et al. (2004). *The Effective Provision of Pre-School Education* (EPPE) Project: Final Report: A Longitudinal Study Funded by the DfES 1997-2004. London: DfES/Institute of Education, University of London.

Sylva, K., Melhuish, E.C., Sammons, P., et al. (2008). *The Effective Pre-School and Primary Education* 3–11. (EPPE 3–11.) Project: Final Report from the Primary Phase: Pre-School, School and Family Influences on Children's Development during Key Stage 2 (Age 7–11). London: DCSF/Institute of Education, University of London.

Sylva, K., Melhuish, E.C., Sammons, P., et al. (2010). *Early Childhood Matters Evidence from the Effective Pre-School and Primary Education Project*. London: Routledge.

Sylva, K., Melhuish, E.C., Sammons, P., et al. (2011). Pre-school quality and educational outcomes at age 11: low quality has little benefit. *Journal of Early Childhood Research* 9(2): 109–124.

Sylva, K., Siraj-Blatchford, I., Taggart, B., et al. (2006). Capturing quality in early childhood through environmental rating scales. *Early Childhood Research Quarterly* 21(1): 76–92.

Tashakkori, A. and Teddlie, C. (eds) (2003). *Handbook of Mixed Methods in Social and Behavioral Research*. Thousand Oaks, CA: SAGE.

Teddlie, C. and Sammons, P. (2010). Applications of mixed methods to the field of educational effectiveness research. In: Creemers BPM, Kyriakides L and Sammons P (eds) *Methodological Advances in Educational Effectiveness Research*. London: Routledge, pp. 115–152.

Thomason, A.C. and La Paro, K.M. (2013). Teachers' commitment to the field of teacher-child interactions in center-based child care for toddlers and three-year-olds. *Early Childhood Education Journal*, 41, 227-234.

Vandell, D.L. and Wolfe, B. (2000). *Child care quality: does it matter or does it need to be improvised?* Special Report no. 78. November Madison, WI: Institute of Research on Poverty, University of Wisconsin-Madison.

Vincent, C. and Ball, S. (2001). A market in love? Choosing pre-school childcare. *British Educational Research Journal* 27(5): 633–651.

Vincent, C., Ball, S.J. and Braun, A. (2010). Between the estate and the state: struggling to be a 'good' mother. *British Journal of Sociology of Education* 31(2): 123–138.

Vincent, C., Braun, A. and Ball, S. (2008). Childcare, choice and social class: caring for young children in the UK. *Critical Social Policy* 28(1): 5–26.

Volling, B. and Belsky, J. (1993). Parent, infant, and contextual characteristics related to maternal employment decisions in the first year of infancy. *Family Relations* 42(1): 4–12.

Whitty, G. (2004). Education(al) research and education policy making: is conflict inevitable? *British Educational Research Journal* 32(2): 159–176.